

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation		Disposition			
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : ☐			

Tuesday, May 26, 2015 12:50:50 PM

Item ID: D3220-041

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Doubler Assembly

Start Date: 5/26/15 **Start Qty:** 2.00 ***2***

Cust Item ID:

Required Date: 5/26/15 **Req'd Qty:** 2.00 ***~***

Customer:

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop ***NR2***

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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130

0.00

130

Small Fab

Small Fab

Memo

Small Fab

1-Deburr

2-C'sink D3220-1 as per Dwg D3220

140

QC5- Inspect part completeness to step on W/O

0.00

140

QC

Memo

Quality Control

150

Chemical Conversion Coat per QSI005 4.1

0.00

150

HandFinish

Memo

Hand Finishing

0.00

② 12/15/06/04

DAS
36
9-89

DAS
05
9-89 15.6.4

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		OTHER : ☐			

Work Order ID 133193

133193

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Item ID: D3220-041 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Doubler Assembly
 Start Date: 5/26/15 Start Qty: 2.00 *2* Cust Item ID:
 Required Date: 5/26/15 Req'd Qty: 2.00 *2* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	Identify as per dwg & Stock Location: _____	0.00				2			
190									
Packaging	Memo	0.00							
Packaging									
200	QC21- Final Inspection - Work Order Release	0.00							
200									
QC	Memo	0.00							
Quality Control									

MLJ JUN 22 2015

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Picklist Print

Tuesday, May 26, 2015 12:50:49 PM

Page 1

Work Order ID: 133193

133193

Parent Item: D3220-041

D3220-041

Parent Item Name: Doubler Assembly

Start Date: 5/26/15

Required Date: 5/26/15

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:A New Issue 05-11-06 JLM
IPP: B 06.11.15 waterjet EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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M2024T3S.050

Purchased

No

100

sf

94.4341

0.6926

(2)

M2024T3S 050

2024-T3 .050 sheet

**

Jm 15-6-3

Location

Loc Qty

Loc Code

MAT022

94.4341

m128354

1.4341

m131564

93

131564

MS20426AD3-3

Purchased

No

170

Each

4,700.000

8

16

MS20426AD3-3

RIVET

**

15/06/17

DAS
36
9-89

Location

Loc Qty

Loc Code

ST313

4700

M131624

4700

16

MS21059L4

Purchased

No

170

Each

15.0000

4

8

MS21059L 4

Nutplate

**

15/06/17

DAS
36
9-89

Location

Loc Qty

Loc Code

ST303

15

m129764

15

7

DQA: _____ Date: _____



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DART AEROSPACE LTD		Work Order:	133193
Description: Doubler		Part Number:	D3220-1
Inspection Dwg: D3220 Rev: B		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ **First Article**

 ☐ **Prototype**

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
5.50	+/-0.030	5.50"	-		V	Jkm01
14.25	+/-0.030	14.25"	-		T	Jkm07
R0.50	+/-0.030	0.50"	-		RG	
7.00	+/-0.030	7.00"	✓		V	
7.000	+/-0.005	7.000"	✓		V	
1.50	+/-0.030	1.50"	✓		V	
1.000	+/-0.005	1.000"	-		V	
0.500	+/-0.005	0.500"	✓		V	
1.000	+/-0.005	1.000"	-		V	
Ø 0.316	+0.005/-0.000	0.316"	✓		V	
Ø 0.098	+0.005/-0.000	0.098"	✓		V	
0.050 thick	+/-0.005	0.050"	✓		V	
Grain Direction	N/A	—	✓			

Measured by: Jm		DAS 05 9-89		Prototype Approval: N/A	
Date: 15-6-3		Audited by:		Date: 15.6.3	
				Date: N/A	

Rev	Date	Change	Revised by	Approved
A	04.02.27	New Issue P/O D3220-041	KJ/RF	
B	10.02.02	Dwg Rev updated	KJ	

Item	Qty -041	Qty -042	Part Number	Description
1	X		D3220-041	DOUBLER ASSEMBLY
2		X	D3220-042	DOUBLER ASSEMBLY
3	1		D3220-1	DOUBLER
4		1	D3220-2	DOUBLER
5	4	4	MS21059L4	NUTPLATE
6	8	8	MS20426AD3-3	RIVET

B
MS21059L4 NUTPLATE
MS20426AD3-3 RIVET, 2X
4 PL

6

D3220-1/2 DOUBLER

**D3220-041 DOUBLER ASSEMBLY (SHOWN WITH D3220-1 DOUBLER)
D3220-042 (OPPOSITE)**

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3220-04X" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: D3220-041 = 0.53 lbs
D3220-042 = 0.53 lbs

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WITHOUT NOTICE
WORK ORDER
NO. 133-193-MCJ
1505-27

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2009-09-09

B	DRAWING UPDATED TO CURRENT STANDARDS. Ø0.316 WAS Ø0.323 (ZN C8-2, B4-3); MS20426AD3-3 WAS MS20426AD3-4 (ZN D4-1); CORRECT TYPO NOTE 1 (ZN A8-2, A8-3); REF PAR 09-025		RF	09.07.08
A	NEW ISSUE		CP	03.10.16
REV	DESCRIPTION		BY	DATE
DESIGN	DS	DART AEROSPACE LTD		
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA		
CHECKED		DRAWING NO.	REV. B	
MFG. APPR.		D3220	SHEET 1 OF 4	
APPROVED		TITLE	SCALE	
DE APPR.		DOUBLER	NTS	
DATE	09.07.08			

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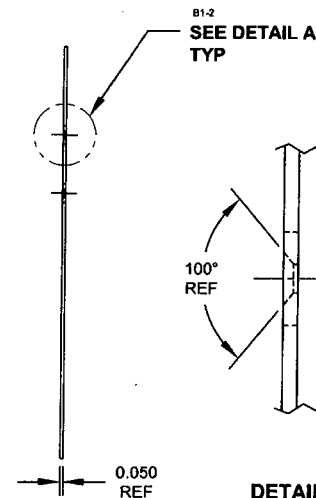
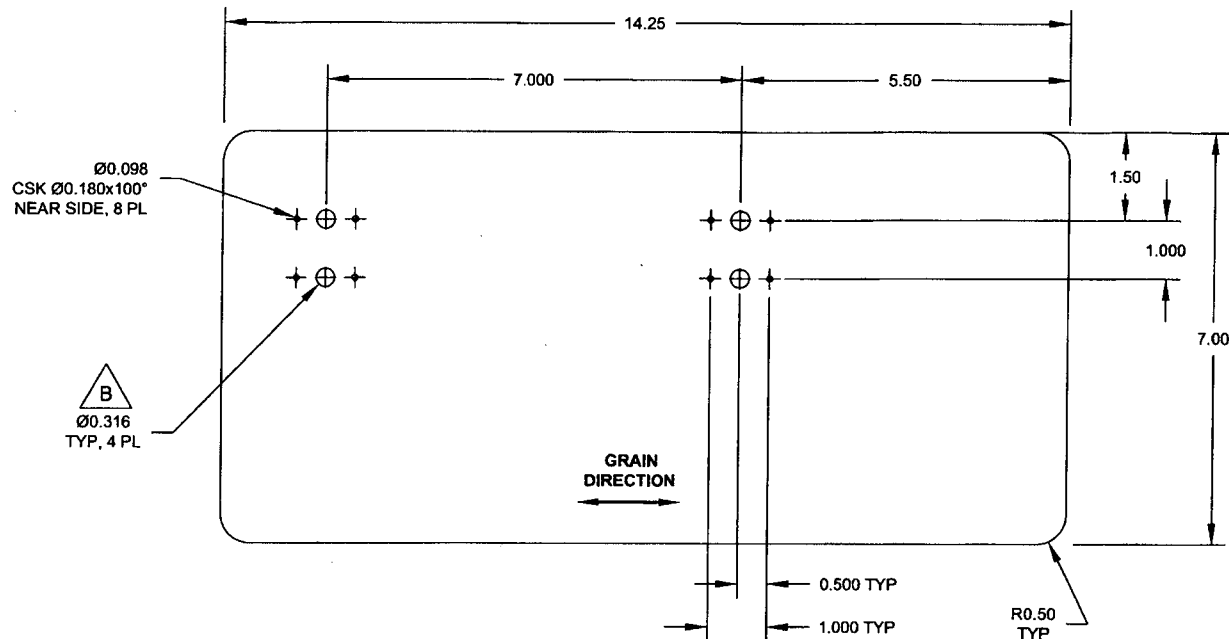
8 7 6 5 4 3 2 1

D

C

B

A



D3220-1 DOUBLER

DETAIL A
SCALE 5X

RELEASED
2009-09-09
W

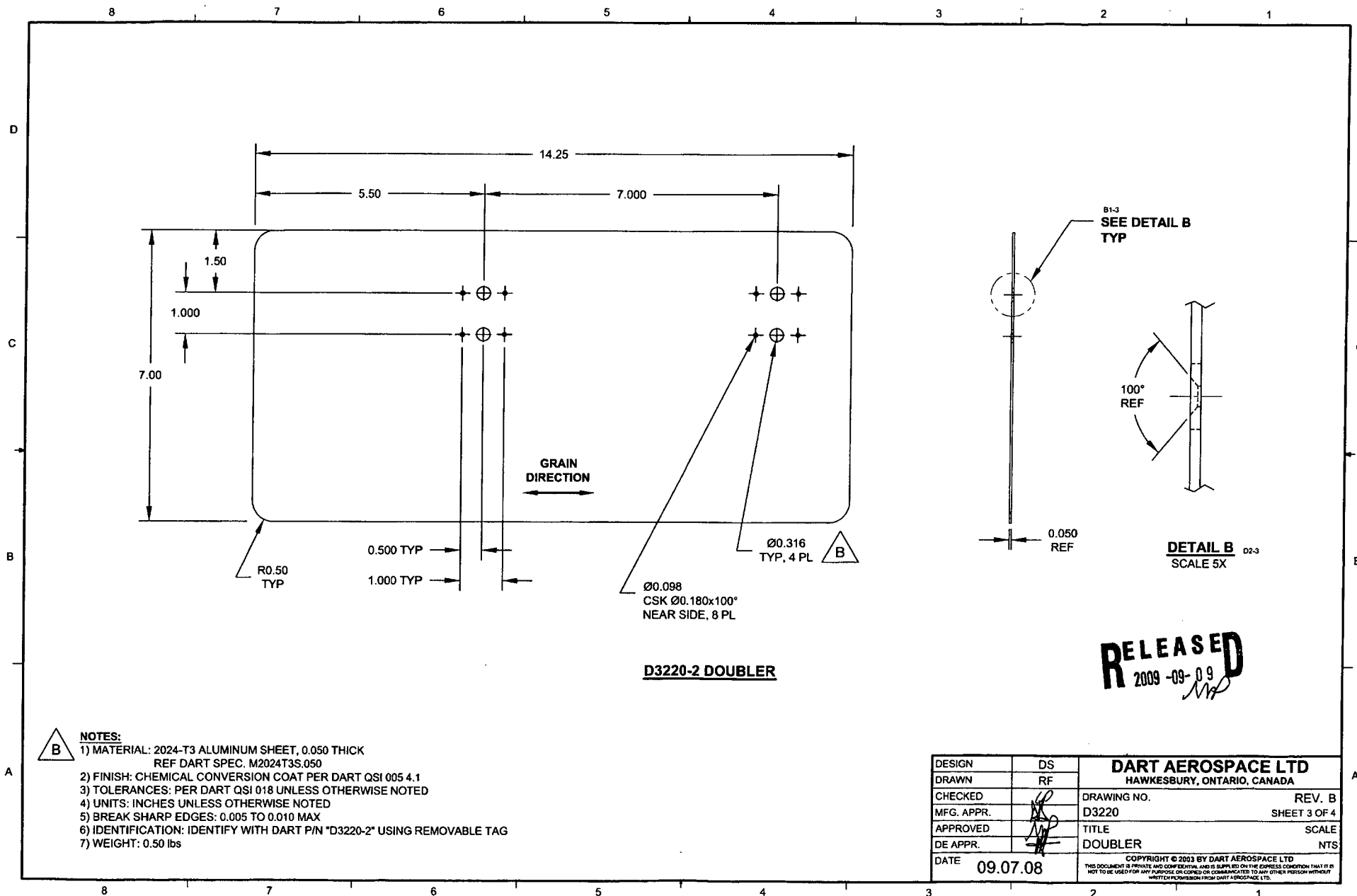


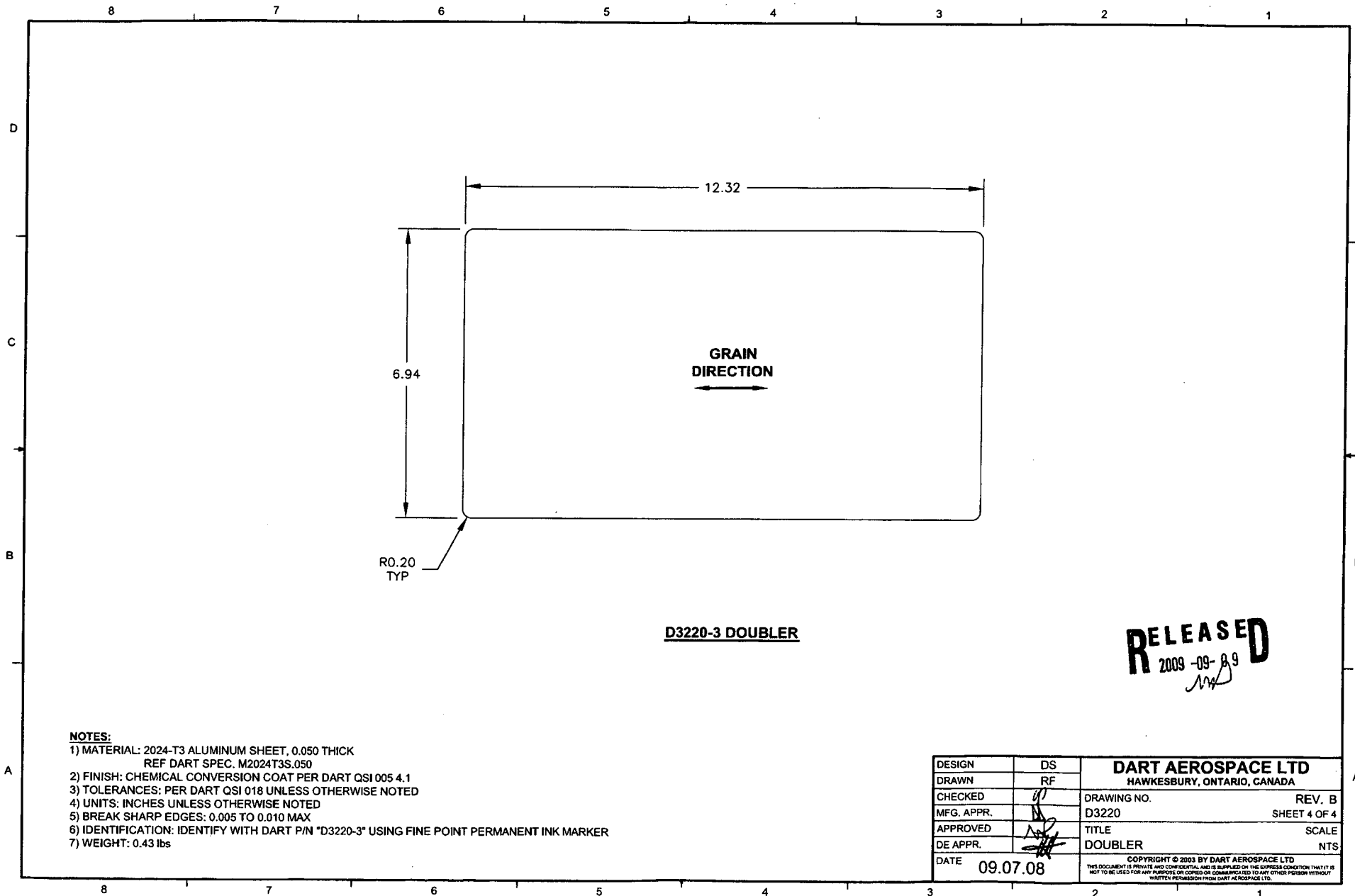
NOTES:

- 1) MATERIAL: 2024-T3 ALUMINUM SHEET, 0.050 THICK
REF DART SPEC, M2024T3S.050
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3220-1" USING REMOVABLE TAG
- 7) WEIGHT: 0.50 lbs

DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
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MFG. APPR.		D3220	SHEET 2 OF 4
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DE APPR.		DOUBLER	NTS
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8 7 6 5 4 3 2 1





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REF DART SPEC. M2024T3S.050
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3220-3" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.43 lbs

DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D3220	SHEET 4 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	DOUBLER	NTS
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